DAILY FIELD ACTIVITY REPORT

PROJECT NAME: Pre-Remedial Design Investigation and Baseline Sampling, Portland Harbor Superfund Site

DATE: July 10, 2018	**WEATHER:** Overcast to partly cloudy, High ~ 73 degrees F

Personnel and Visitors Onsite:
Research vessel Cayuse – CDM Smith: Libby Miner; Geosyntec: Luke Smith; Gravity Marine: Rene Trudeau, Maggie McKeon; AECOM: Mark Tauscher

Planned Activity:

- Perform porewater location pre-screening at Downtown/Upriver (D/U) locations.

Activity Completed:
A meeting was held at the field warehouse to go over the new Porewater FSP and logistics for carrying out the pre-screening task.

A tailgate safety meeting was led by AECOM. Topics discussed during the safety meeting included communication while executing the new probing task, potential safety issues with the probing task, and location of first aid equipment on the Cayuse.

Libby Miner performed oversight of surface sediment sampling from 11:00 to 17:40 on board the Cayuse. Specific activities completed by the AECOM/Geosyntec team, with vessel support from Gravity Marine, are as follows:

- Position check at PH-2 indicated that the vessel GPS was reading within 1.5 meters of the PH-2 survey coordinates, meeting the 1-2 m accuracy specification in the FSP.
- Surface sediment was pre-screened for anoxic conditions at 3 D/U locations between RM 14 and 16 in the D/U reach as summarized below. Activities included decontamination of sampling equipment using Alconox and deionized/distilled water, cleaning instruments with DI water, and housekeeping of the sampling area.

Status of Schedule & Priority Work:

- Porewater pre-screening will continue tomorrow at D/U locations.

Issues/Concerns/Resolutions (include work performed that was not planned or anticipated):

The field crew performed a 1-point calibration on the two YSI Pro ODO optical dissolved oxygen (DO) probes as the solution necessary for a 2-point was not available. They should acquire the solution in time for a 2-point calibration for the following day.

While performing ex-situ DO measurements on sample taken at B441, the readings were exceedingly high (~8.5 mg/L). Some troubleshooting revealed that the probe was not measuring properly, possibly due to overlying water draining from the sample and the protective screen on the probe holding dry sand and not allowing for measurements at varying depths. Removing the protective screen seemed to solve the problem. Note: the screen had been added by the field team and was not supplied by the instrument manufacturer.

Wet-sieving was not conducted on the grab at B455 (sample was accidentally dumped first).

The ex-situ grab at B-455 was not collected near where the in-situ probe was conducted, due to heavy debris in that area. The ex-situ grab was 58-ft from the in-situ measurement, but within 50-ft of primary. The in-situ was also within 50-ft of primary.

The crew took several measurements at a location in Swan Island Lagoon as an additional check on the DO instrument readings and noticed that side-by-side measurements with the two DO probes (used for in-situ and ex-situ) yielded slightly different results- the probe used for ex-situ was reading slightly higher than the probe used for in-situ (0.2 versus 0.6 mg/L). The team plans to discuss and perform calibrations again the following day.

Samples Collected, Measurements Made, Photographs: (List Locations, Matrix & Sample type):
On the Cayuse, in-situ DO and ex-situ DO and ORP measurements were made at the following locations:

- PDI-SG-B441 – in 50-FT radius of primary, ~RM14.0E, DO 0.43 mg/L (in-situ), DO 0.8 to 0.66 mg/L (ex-situ), ORP 13.3 to 14.7 mV
- PDI-SG-B455 – in 50-FT radius of primary, ~RM15.6E, DO 0.43 mg/L (in-situ), DO 7.92 to 0.71 mg/L (ex-situ), ORP 13.5 to 20.7 mV
- PDI-SG-B454 – in 50-FT radius of primary, ~RM15.6W, DO 0.38 mg/L (in-situ), DO 0.83 to 0.66 mg/L (ex-situ), ORP 7.8 to 13.7 mV

Photographs of work were taken throughout the day and provided to EPA via email. Additional photos were taken and archived with a description included in the photolog Excel spreadsheet, which are maintained electronically in the ProjectWise project folder.

Borings Completed (Include total footage drilled for each boring):
None

Wastes Generated and How Handled:

- Excess sediment and debris from today's sampling activities was rinsed back into the river per the FSP. No heavy sheen was observed today.
- Disposable gloves, paper towels, and other general trash was containerized in a trash bag and removed daily for disposal to a municipal waste management dumpster.

Health and Safety Issues, Equipment Needs, Staffing:
None observed

Signature: Libby Miner **DATE** July 10, 2018